AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A three-dimensional image display device, comprising:

a display panel where a plurality of pixel sections, which include pixels displaying an image for the right eye and pixels displaying an image for the left eye, are arrayed in matrix form, the pixels displaying said image for the right eye and the pixels displaying image for the left eye being periodically arranged in a horizontal direction; and

an optical unit that emits light emitted from the pixels displaying said image for the right eye and light emitted from the pixels displaying said image for the left eye in directions different from each other,

wherein a three-dimensional visible range is defined as, when a midpoint between a viewer's right eye and left eye is positioned in said three-dimensional visible range, the light emitted from the pixels displaying said image for the right eye is made incident to said right eye and the light emitted from the pixels displaying said image for the left eye is made incident to said left eye, and

wherein, when a distance ~~in the normal direction from a point of~~ between said display panel to ~~a viewer's midpoint is within~~ a point ~~in~~ within said three-dimensional visible range, the point, being most distant from the display panel in a normal direction, is set to D (mm) and a definition of said pixel sections in a first direction perpendicular to said horizontal direction and

the vertical direction perpendicular to said horizontal direction and parallel to the surface of said display panel is set to X (dpi), said distance D and said definition X satisfy the expression: ~~then the light emitted from the pixels displaying said image for the right eye is made incident to said right eye and the light emitted from the pixels displaying said image for the left eye is made incident to said left eye by positioning a midpoint between a viewer's right eye and left eye in a normal direction from said display panel within said three-dimensional visible range, and~~

~~wherein said display panel is set at a distance D (mm), from the midpoint, and~~

~~the definition of said pixel sections in at least one array direction out of the perpendicular array directions of said pixel sections of said display panel is set to X (dpi), and~~

~~where said distance, D, and said definition, X, satisfy the following expression~~:

$$X \geq \frac{25.4}{\text{~~D tan(1')~~ } D*0.000291}.$$

2. (Currently Amended) The three-dimensional image display device according to Claim 1, wherein ~~when the~~ a definition of said pixel sections in ~~another~~ a second ~~array~~ direction, ~~which crosses said one array direction out of the perpendicular~~ crossing to the first direction ~~array directions of said pixel sections,~~ and parallel to the surface of said display panel satisfies the expression for the definition in claim 1. ~~is set to Y (dpi), said distance D, and said definition Y, satisfy the following expression:~~

~~$$Y \geq \frac{25.4}{D \tan(1')}.$$~~

3. (Original) The three-dimensional image display device according to Claim 1, wherein said display panel is a liquid crystal display panel.

4. (Currently Amended) The three-dimensional image display device according to Claim 1, wherein said optical unit is a parallax barrier ~~where~~ wherein a plurality of slits~~, which~~ are periodically arranged in said horizontal direction. ~~for each row of said pixel sections and extend along an extending direction of the row, are formed.~~

5. (Currently Amended) The three-dimensional image display device according to Claim 1, wherein said optical unit is a lenticular lens that is arranged on the viewer side of said display panel, provided with a plurality of cylindrical lenses extended in said vertical direction and periodically arranged in a horizontal direction. ~~for each row of said pixel sections and extended in a row direction.~~

6. (Currently Amended) A three-dimensional image display device, comprising:

a display panel where a plurality of pixel sections, which include pixels displaying an image for the right eye and pixels displaying an image for the left eye, are arrayed in matrix form, the pixels displaying said image for the right and the pixels displaying said image for the left eye being periodically arranged in a horizontal direction; and

optical unit that emits light emitted from the pixels displaying said image for the right eye and light emitted from the pixels displaying said image for the left eye in directions different from each other,

wherein a three-dimensional visible range is defined as, when a midpoint between a viewer's right eye and left eye is positioned in said three-dimensional visible range, the light emitted from the pixels displaying said image for the right eye is made incident to said right eye and the light emitted from the pixels displaying said image for the left eye is made incident to said left eye, and

wherein the distance between said display panel and the point in said three-dimensional visible range, the point being most distant from said display panel is set to 500 mm or more, and the definition of said pixel sections in a first direction out the horizontal and the vertical direction perpendicular to said horizontal direction and parallel to the surface said display panel is 175 dpi or more.

~~wherein the distance in the normal direction from a point of said display panel to a viewer's midpoint is within a three dimensional visible range, where the light emitted from the pixels displaying said image for the right eye is made incident to said right eye and the light emitted from the pixels displaying said image for the left eye is made incident to said left eye by positioning a midpoint between a viewer 's right eye and left eye in a range of 500mm or more, and the definition of said pixel sections in at least one array direction out of the perpendicular array directions of said pixel sections is 175 dpi or more.~~

7. (Currently Amended) The three-dimensional image display device according to Claim 6, wherein ~~the definition of said pixel sections in another array direction, which crosses said one array direction out of the array directions of said pixel sections,~~ a definition of said pixel

sections in a second direction crossing to said first direction and parallel to the surface of said display panel is is 175 dpi or more.

8. (Original) The three-dimensional image display device according to Claim 6, wherein said display panel is a liquid crystal display panel.

9. (Currently Amended) The three-dimensional image display device according to Claim 6, wherein said optical unit is a parallax barrier ~~where~~ wherein a plurality of slits~~, which~~ are periodically arranged in said horizontal direction. ~~for each row of said pixel sections and extend along an extending direction of the row, are formed.~~

10. (Currently Amended) The three-dimensional image display device according to Claim 6, wherein said optical unit is a lenticular lens that is arranged on the viewer side of said display panel, and is provided with a plurality of cylindrical lenses extended in said vertical direction and periodically arranged in said horizontal direction.~~arranged for each row of said pixel sections and extended along an extending direction of the row.~~

11. (Original) The three-dimensional image display device according to Claim 1, wherein said device displays a three-dimensional moving picture.

12. (Original) The three-dimensional image display device according to Claim 1, wherein said device is mounted in a portable device.

13. (Original) The three-dimensional image display device according to Claim 12, wherein said portable device is any one of a cellular phone, a portable terminal, a PDA, a game device, a digital camera, and a digital video camera.

14. (Currently Amended) A three-dimensional image display method, wherein:

a plurality of ~~said~~ pixel sections are arrayed in matrix form on a display panel, in which one pixel included in each pixel section displays an image for the right eye and another pixel displays an image for the left eye, the pixels displaying said image for the right eye and the pixels displaying said image for the left eye being periodically arranged in a horizontal direction;

an optical unit emits light, such that light emitted from the pixels displaying said image for the right eye and light emitted from the pixels displaying said image for the left eye, are in directions different from each other, and

a viewer positions a midpoint between the right eye and the left eye in a three-dimensional visible range, such that the light emitted from the pixels displaying said image for the right eye is made incident to said right eye and the light emitted from the pixels displaying said image for the left eye is made incident to said left eye,

wherein when the normal distance between said midpoint and said display panel is set to OD (mm) and ~~the~~ a definition of said pixel sections, in ~~at least one~~ a first ~~array~~ direction out of

~~the two perpendicular array directions of said pixel sections of said display panel,~~ a horizontal direction and a vertical direction perpendicular to said horizontal direction and parallel to the surface of said display panel is set to X (dpi), said distance, OD, and said definition, X, satisfy the following expression:

$$X \geq \frac{25.4}{OD * 0.000291 \ \tan(1')}$$

15. (Currently Amended) The three-dimensional image display method according to Claim 14, wherein ~~when the~~ a definition of said pixel sections in ~~another~~ a second ~~array~~ direction, ~~which crosses said one array direction out of the perpendicular~~ crossing to the first direction and parallel to the surface of said display panel satisfies the expression for the definition in claim 14. ~~array directions of said pixel sections,~~ and a definition in the second direction satisfies the expression for the definition in claim 1. ~~is set to Y (dpi), said distance D, and said definition Y, satisfy the following expression:~~

~~$$Y \geq \frac{25.4}{D \tan(1')}.$$~~

16. (Original) The three-dimensional image display method according to Claim 14, wherein a liquid crystal display panel is used as said display panel.

17. (Currently Amended) The three-dimensional image display method according to Claim 14, wherein said optical unit comprises a parallax barrier, ~~where~~ wherein a plurality of slits, ~~which~~ are periodically arranged in said horizontal direction. ~~for each row of said pixel~~

~~sections, and extend along an extending direction of the row, are formed is used as said optical unit~~.

18. (Currently Amended) The three-dimensional image display method according to Claim 14, wherein said optical unit is a lenticular lens that is arranged on the viewer side of said display panel~~,~~ and is provided with a plurality of cylindrical lenses extended in said vertical direction and periodically arranged in a horizontal direction. ~~arranged for each row of said pixel sections, and extended along an extending direction of the row, is used as said optical unit.~~

19. (Currently Amended) A three-dimensional image display method, wherein:

a plurality of ~~said~~ pixel sections are arrayed in matrix form on a display panel, wherein one pixel included in each section displays an image for the right eye and another pixel displays an image for the left eye, the pixels displaying said image for the right eye and the pixels displaying said image for the left eye being periodically arranged in a horizontal direction; and

an optical unit emits light such that light emitted from the pixels displaying said image for the right eye and light emitted from the pixels displaying said image for the left eye are in directions different from each other,

and a viewer positions a midpoint between the right eye and the left eye in a three-dimensional visible range ~~where~~ such that the light emitted from the pixels displaying said image for the right eye is made incident to said right eye and the light emitted from the pixels displaying said image for the left eye is made incident to said left eye,

wherein the distance between said midpoint and said display panel is set to 500mm or more, and the definition of said pixel sections in a first direction out of the horizontal direction and the vertical direction perpendicular to said horizontal direction and parallel to the surface ~~at least one array direction out of the perpendicular array directions of said pixel sections~~ of said display panel is set to 175 dpi or more.

20. (Currently Amended) The three-dimensional image display method according to Claim 19, wherein ~~the~~ a definition of said pixel sections in ~~another array~~ a second direction, ~~which crosses said one array direction out of the array~~ crossing to said first direction and parallel to the surface of the display panel, ~~directions of said pixel sections,~~ is set to 175 dpi or more.

21. (Original) The three-dimensional image display method according to Claim 19, wherein a liquid crystal display panel is used as said display panel.

22. (Currently Amended) The three-dimensional image display method according to Claim 19, wherein said optical unit comprises a parallax barrier, wherein ~~where~~ a plurality of slits, ~~which~~ are arranged ~~for each row of said pixel sections.~~ in said horizontal direction. ~~and extend along an extending direction of the row, are formed is used as said optical unit.~~

23. (Currently Amended) The three-dimensional image display method according to Claim 19, wherein said optical unit is a lenticular lens that is arranged on the viewer side of said

display panel~~,~~ and is provided with a plurality of cylindrical lenses extended in said vertical direction and periodically arranged in said horizontal direction. ~~arranged for each row of said pixel sections, and extended along an extending direction of the row, is used as said optical unit.~~

24. (Original) The three-dimensional image display method according to Claim 14, wherein said method displays a three-dimensional moving picture.